

WHAT IS CLAIMED IS:

1. A cap moving mechanism for moving a cap for sealing a liquid ejecting head for ejecting liquid to a target, comprising:

a pushing-up part for moving said cap upwards or downwards by rotating;

a cam shaft provided integrally with said pushing-up part as a rotating shaft of said pushing-up part;

a cam shaft gear comprising a drive region, which rotates integrally with said cam shaft taken as a rotating shaft, whereby a driving force of a motor for driving said cam shaft is transmitted, and a non-drive region whereby said driving force of said motor is not transmitted; and

a driving force transmission gear for transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved downwards from a state in which said cap has been completely moved upwards, after said motor rotates by a predetermined amount from when said cap has been completely moved upwards, and transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved upwards from a state in which said cap has been completely moved downwards, after said motor rotates by a predetermined amount from when said cap has been completely moved downwards.

2. A cap moving mechanism as claimed in claim 1, wherein said driving force transmission gear comprises:

a toothed gear comprising a drive region whereby said driving force of said motor is transmitted and a non-drive region whereby said driving force of said motor is not transmitted;

a spur gear being in contact with said toothed gear; and

an energizing part for transmitting a rotating force of said spur gear to said toothed gear, and

said spur gear rotates freely against said cam shaft taken as a center axis, said spur gear receiving said driving force of said motor, said spur gear energized by said energizing part towards said toothed gear, said toothed gear thereby being rotated accompanying said spur gear.

3. A cap moving mechanism as claimed in claim 2, wherein said toothed gear can rotate freely against said cam shaft taken as a center axis by a predetermined rotation angle.

4. A cap moving mechanism as claimed in claim 3, wherein said drive region of said toothed gear is arranged in at least a part of an angle area in which said non-drive region of said cam shaft gear is arranged with regard to said cam shaft.

5. A cap moving mechanism as claimed in claim 2, wherein said toothed gear further comprises two of said non-drive regions between which said drive region is held.

6. A cap moving mechanism as claimed in claim 2, wherein said toothed gear is arranged between said cam shaft gear and said spur gear.

7. A cap moving mechanism as claimed in claim 2 further comprising:

at least two of said pushing-up parts between which said cam shaft gear, said toothed gear, said spur gear and said energizing part are arranged.

8. A cap moving mechanism as claimed in claim 2, wherein said pushing-up part is cam-shaped.

9. A liquid ejecting apparatus for ejecting liquid to a target, comprising:

a liquid ejecting head for ejecting liquid to said target;

a cap for sealing said liquid ejecting head;

a pushing-up part for moving said cap upwards or downwards by rotating;

a cam shaft provided integrally with said pushing-up part as a rotating shaft of said pushing-up part;

a cam shaft gear comprising a drive region, which rotates integrally with said cam shaft taken as a rotating shaft, whereby a driving force of a motor for driving said cam shaft is transmitted, and a non-drive region whereby said driving force of said motor is not transmitted; and

a driving force transmission gear for transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved downwards from a state in which said cap has been completely moved upwards, after said motor rotates by a predetermined amount from when said cap has been completely moved upwards, and transmitting said driving force of said motor to said cam shaft gear in order that said cap can be moved upwards from a state in which said cap has been completely moved downwards, after said motor rotates by a predetermined amount from when said cap has been completely moved downwards.

10. An ejection characteristics maintaining mechanism for maintaining ejection characteristics of a liquid ejecting head for ejecting liquid to a target, comprising:

a motor for generating a driving force;

a conveying part for conveying said target based on said driving force;

a cap for sealing said liquid ejecting head;

a pump for sucking liquid from said cap; and

a driving force switching part for stopping transmitting said driving force to said conveying part, moving said cap to seal said liquid ejecting head based on said driving force, and driving said pump to suck liquid from said cap after said cap seals said liquid ejecting head.

11. An ejection characteristics maintaining mechanism as claimed in claim 10 further comprising:

a wiper for wiping said liquid ejecting head by moving forward onto a movement path of said liquid ejecting head,

wherein said driving force switching part moves said wiper onto said movement path of said liquid ejecting head based on said driving force, after stopping transmitting said driving force to said conveying part before driving said pump.

12. An ejection characteristics maintaining mechanism as claimed in claim 11, wherein said driving force switching part moves said cap to seal said liquid ejecting head, after said wiper is moved forward onto said movement path of said liquid ejecting head.

13. An ejection characteristics maintaining mechanism as claimed in claim 12, wherein said driving force switching part moves said cap to seal said liquid ejecting head, after a predetermined time from when said wiper is moved forward onto said movement path of said liquid ejecting head.

14. An ejection characteristics maintaining mechanism as claimed in claim 11, wherein said driving force switching part drives said pump, after a predetermined time from when said cap seals said liquid ejecting head.

15. An ejection characteristics maintaining mechanism for maintaining ejection characteristics of a liquid ejecting head for ejecting liquid to a target, comprising:

- a motor for generating a driving force by rotating a normal or reverse direction;

- a conveying part for conveying said target based on said driving force caused by said normal rotation of said motor;

- a for wiping said liquid ejecting head by moving forward onto a movement path of said liquid ejecting head based on said driving force caused by said reverse rotation of said motor;

- a cap for sealing said liquid ejecting head based on said driving force caused by said reverse rotation of said motor;
- and

- a pump for sucking liquid from said cap based on said driving force based caused by said reverse rotation of said motor.

16. An ejection characteristics maintaining mechanism as claimed in claim 15 further comprising:

- a driving force switching part for stopping transmitting said driving force to said conveying part based on said driving force caused by said reverse rotation when said motor rotates in said reverse direction, then moving said wiper forward onto a movement path of said liquid ejecting head, moving said cap to seal said liquid ejecting head after said wiper is moved forward onto said movement path of said liquid ejecting head and driving

said pump to suck liquid from said cap after said cap seals said liquid ejecting head.

17. An ejection characteristics maintaining mechanism as claimed in claim 16, wherein said driving force switching part moves said cap to seal said liquid ejecting head, after said motor rotates in said reverse direction by a predetermined amount from when said wiper is moved forward onto said movement path of said liquid ejecting head.

18. An ejection characteristics maintaining mechanism as claimed in claim 17, wherein said driving force switching part drives said pump, after said motor rotates in said reverse direction by a predetermined amount from when said cap seals said liquid ejecting head.